



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,427	08/23/2001	Ali Bani-Hashemi	2001 P 05443 US	1376

7590

06/28/2005

Siemens Corporation  
Intellectual Property Department  
186 Wood Avenue South  
Iselin, NJ 08830

EXAMINER

BRIER, JEFFERY A

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/818,427	<b>Applicant(s)</b> BANI-HASHEMI ET AL.	
	<b>Examiner</b> Jeffery A. Brier	<b>Art Unit</b> 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13, 15-26, 29-35 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 15-26, 29-35, and 37-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing-sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2672

***Detailed Action***

***Response to Amendment***

1. The amendment filed on 1/31/2005 has been entered.
2. The amendments to the claims overcome the 35 USC 112 second paragraph issues raised in the last office action with the exception of claim 16.

***Response to Arguments***

3. The arguments filed on 1/31/2005 are persuasive with the exception that applicant did not amend nor argue claim 16.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 13, 15-26, 29-35, and 37-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. This application is directed to a useful, concrete, and tangible result, however, these claims are not. These claims are directed to manipulating abstract ideas. *State Street Bank & Trust Co. v. Signature Financial Group Inc.* (CA FC) 47 USPQ2d 1596, 1603 (7/23/1998). *AT&T Corp. v. Excel Communications Inc.* (CA FC) 50 USPQ2d 1447. On page 1603 first paragraph the CAFC wrote in *State Street*:

Under *Benson*, this may have been a sufficient indicium of nonstatutory subject matter. However, after *Diehr* and *Alappat*, the mere fact that a claimed invention involves

Art Unit: 2672

inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it nonstatutory subject matter, unless, of course, its operation does not produce a "useful, concrete and tangible result." *Alappat* , 33 F.3d at 1544, 31 USPQ2d at 1557. 7

On page 1603 paragraph labeled [4] the CAFC wrote:

[4] The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter-- but rather on the essential characteristics of the subject matter, in particular, its practical utility. Section 101 specifies that statutory subject matter must also satisfy the other "conditions and requirements" of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice. See *In re Warmerdam* , 33 F.3d 1354, 1359, 31 USPQ2d 1754, 1757-58 (Fed. Cir. 1994).

The specification uses the term render, graphical, and graphical representation very broadly, thus, when the claims use these terms they are then very broad. Figure 2 illustrates graphics rendering module 220 and page 17 lines 8-17 discusses generating rendered data and supplying rendered data to the video and graphics overlay module 222. Page 53 lines 10-19 discusses visualization and having the user see the graphical representation inherently on display 224. One of ordinary skill in the computer graphics art would recognize the rendered data is high level data and not pixel data representing an image of the generated graphical objects, thus, the terms render and graphical are very broad and cover abstract results of calculations.

Art Unit: 2672

According to the specification an image is displayed on the stereo display 224 to allow the user to view in a displayed graphical environment the position of the instrument, the path the instrument needs to follow, the position of the target, and over time the movement of the instrument towards the target. The display of the graphical environment allows the user to visually receive feedback as the user repositions the instrument in order to align the instrument to the path.

However, the claims do not claim the video and graphics overlay module 222 and stereo display 224 which allow the user to visualize the results of the calculations made in the graphics rendering module 220. Thus, the claims do not claim the practical utility of the invention but instead claim the abstract results of graphics rendering module 220.

Claims 13 and 15-22:

These claims do not claim a concrete, tangible, and useful result. The claimed terms rendering and graphical are abstract terms. The aligning step does not produce a concrete, tangible, and useful result because it is abstract alignment and the claimed intended function "to align the instrument to the path" in the claim does not occur in the claim, it is just an intended function and does not occur until the user views the image displayed on stereo display 224 because the user actually repositions the instrument to the path while viewing the augmented reality display on stereo display 224 and the claim does not claim this.

Art Unit: 2672

Claims 23-26, 29, 30, 40, and 41:

These claims do not claim a concrete, tangible, and useful result. The claimed terms rendering, graphical, and graphical representation are abstract terms. The defining a point and tracing a pose steps are insignificant pre-calculation steps that do not claim a concrete, tangible, and useful result. The aligning step does not produce a concrete, tangible, and useful result because it is abstract alignment and the claimed intended function "to align the instrument to the path" in the claim does not occur in the claim, it is just an intended function and does not occur until the user views the image displayed on stereo display 224 because the user actually repositions the instrument to the path while viewing the augmented reality display on stereo display 224 and the claim does not claim this.

Claims 31-34:

These claims do not claim a concrete, tangible, and useful result. The claimed terms rendering graphical, and graphical representation are abstract terms. The defining a point and tracing a pose steps are insignificant pre-calculation steps that do not claim a concrete, tangible, and useful result. The choosing step is abstract because the graphical representation is an abstract representation of graphical environment. The aligning step does not produce a concrete, tangible, and useful result because it is abstract alignment and the claimed intended function "to align the instrument to the path" in the claim does not occur in the claim, it is just an intended function and does not occur until the user views the image displayed on stereo display 224 because the

Art Unit: 2672

user actually repositions the instrument to the path while viewing the augmented reality display on stereo display 224 and the claim does not claim this.

Claims 35, 38, and 39:

These claims do not claim a concrete, tangible, and useful result. The claimed terms rendering, graphical, graphical information, and graphical representation are abstract terms. The defining a point and tracing a pose steps are insignificant pre-calculation steps that do not claim a concrete, tangible, and useful result. The rendering graphical information step is abstract because the graphical information is an abstract representation of graphical environment. The aligning step does not produce a concrete, tangible, and useful result because it is abstract alignment and the claimed intended function "to align the instrument to the path" in the claim does not occur in the claim, it is just an intended function and does not occur until the user views the image displayed on stereo display 224 because the user actually repositions the instrument to the path while viewing the augmented reality display on stereo display 224 and the claim does not claim this.

Claim 37:

This claim does not claim a concrete, tangible, and useful result. The claimed terms rendering, graphical, graphical information, and graphical representation are abstract terms. The defining a point and tracing a pose steps are insignificant pre-calculation steps that do not claim a concrete, tangible, and useful result. The aligning step does not produce a concrete, tangible, and useful result because it is abstract alignment and

Art Unit: 2672

the claimed intended function "to align the instrument to the path" in the claim does not occur in the claim, it is just an intended function and does not occur until the user views the image displayed on stereo display 224 because the user actually repositions the instrument to the path while viewing the augmented reality display on stereo display 224 and the claim does not claim this. The limitation after the wherein clause does not add a concrete result because the directly observed limitation is an abstract process. This claim does not claim the user directly observes the distance from the display graphical environment display on stereo display 224.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 13, 15-26, 29-35, and 37-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13:

Claim 13 lines 11-12 has been amended to claim "aligning the at least one identified graphical axis marker with respect to the at least one graphics guide to align the instrument to the path". This step is incomplete because it does not state how the at least one graphics guide is aligned to the instrument to the path. Thus essential steps in understanding the claim have been omitted, such omission amounting to a gap between the steps. See MPEP § 2172.01. The specification describes the user of the



Art Unit: 2672

instrument, when viewing the augmented reality display on stereo display 224, repositions the instrument so the instrument moves towards alignment with the target and consequentially the instrument's corresponding displayed graphical axis marker becomes aligned with the displayed graphics path guide. Alternatively if the user moved the instrument away from alignment with the target then the instrument's corresponding displayed graphical axis marker will not become aligned with the displayed graphics path guide. Therefore additional steps need to be added to this claim to clarify how the claimed claim "aligning the at least one identified graphical axis marker with respect to the at least one graphics guide to align the instrument to the path" occurs.

Claim 23:

Claim 23 has the same limitation at lines 16-17 that claim 13 has at lines 11-12.

Claim 31:

Claim 31 has the same limitation at lines 16-17 that claim 13 has at lines 11-12.

Claim 35:

Claim 35 has the same limitation at lines 17-18 that claim 13 has at lines 11-12.

Claim 37:

Claim 37 has the same limitation at lines 14-15 that claim 13 has at lines 11-12.

Art Unit: 2672

Claims 15-22, 24-26, 29, 30, 32-34, and 38-41:

These dependent claims do not correct the problems noted above for their respective independent claims.

Claim 16:

This claim conflicts with amended to claim construction and rendering at least one graphical axis marker while claim 16 claims the method according to claim 13, further comprising the step of selecting an existing feature of the instrument to be a graphical axis marker. Constructing and rendering at least one graphical axis marker is different than using an existing feature as a graphical axis marker. Additionally claim 16 does not clearly claim whether the graphical axis marker in the claim 16 is the same graphical axis marker found in parent claim 13 or another graphical axis marker in addition to the previously claimed graphical axis marker.

8. A prior art rejection cannot be made because the metes and bounds of the claims are not definite and because the specification does not limit the broad and questionable claim limitations. Thus, an indication of allowability would be premature. In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative assumptions regarding the meaning of a claim and then base a rejection under 35 U.S.C. 103 on these assumptions). Claim amendments are necessary to overcome the 112 and 101 rejections.

Art Unit: 2672

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (571) 272-7656. The examiner can normally be reached on M-F from 7:00 to 3:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (571) 272-7664. The fax phone Number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffery A Brier  
Primary Examiner  
Art Unit 2672